SANTA CRUZ BIOTECHNOLOGY, INC.

STON2 (A-5): sc-514542

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

STON2 (stonin 2), also known as STN2, STNB or STNB2, is a 905 amino acid protein that localizes to both the cytoplasm and the membrane and contains one stonin homology domain and one μ homology domain. Expressed ubiquitously, STON2 interacts with Synaptotagmin I and Synaptotagmin II and functions as an adaptor protein that is involved in endocytotic machinery and may also play a role in vesicle recycling and clathrin-coated vesicle uncoating. Multiple isoforms of STON2 exist due to alternative slicing events. The gene encoding STON2 maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the presinilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder α1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

1. Brunger, A.T. 2001. Structural insights into the molecular mechanism of calcium-dependent vesicle-membrane fusion. Curr. Opin. Struct. Biol. 11: 163-173.
2. Walther, K., et al. 2001. Human stoned B interacts with AP-2 and Synaptotagmin and facilitates clathrin-coated vesicle uncoating. EMBO Rep. 2: 634-640.
3. Martina, J.A., et al. 2001. Stonin 2: an adaptor-like protein that interacts with components of the endocytic machinery. J. Cell Biol. 15: 1111-1120.

CHROMOSOMAL LOCATION

Genetic locus: STON2 (human) mapping to 14q31.1; Ston2 (mouse) mapping to 12 D3.

SOURCE

STON2 (A-5) is a mouse monoclonal antibody raised against amino acids 224-402 mapping within an internal region of STON2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STON2 (A-5) is available conjugated to agarose (sc-514542 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514542 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514542 PE), fluorescein (sc-514542 FITC), Alexa Fluor® 488 (sc-514542 AF488), Alexa Fluor® 546 (sc-514542 AF546), Alexa Fluor® 594 (sc-514542 AF594) or Alexa Fluor® 647 (sc-514542 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514542 AF680) or Alexa Fluor® 790 (sc-514542 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

STON2 (A-5) is recommended for detection of STON2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for STON2 siRNA (h): sc-92095, STON2 siRNA (m): sc-153905, STON2 shRNA Plasmid (h): sc-92095-SH, STON2 shRNA Plasmid (m): sc-153905-SH, STON2 shRNA (h) Lentiviral Particles: sc-92095-V and STON2 shRNA (m) Lentiviral Particles: sc-153905-V.

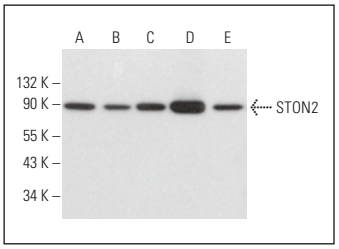
Molecular Weight of STON2: 88 kDa.

Positive Controls: NCI-H929 whole cell lysate: sc-364786, T98G cell lysate: sc-2294 or HL-60 whole cell lysate: sc-2209.

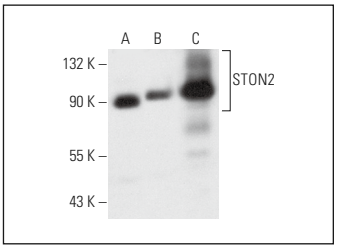
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



STON2 (A-5): sc-514542. Western blot analysis of STON2 expression in HEL 92.1.7 (**A**), K-562 (**B**), J774.A1 (**C**), Neuro-2A (**D**) and C6 (**E**) whole cell lysates.



STON2 (A-5): sc-514542. Western blot analysis of STON2 expression in HL-60 (**A**), T98G (**B**) and NCI-H929 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Adcox, H.E., et al. 2022. Orientia tsutsugamushi OtDUB is expressed and interacts with adaptor protein complexes during infection. Infect. Immun. 90: e0046922.

RESEARCH USE

For research use only, not for use in diagnostic procedures.